



APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The following is a marked-up version of the changes to the claims which are being made in the attached response to the Office Action dated December 19, 2001.

IN THE CLAIMS:

1. (Twice Amended) A viewing optical system comprising:
an objective system for forming on an image surface an image of an object;
an eyepiece system for enlarging and directing the image to a pupil;
a hologram combiner comprising a reflective type hologram and having an optical power for constructing an equivalent surface which is optically equivalent to the image surface at a different position than the image surface as viewed from the pupil; and
an information display device for displaying information on the equivalent surface, wherein the hologram combiner transmits light from the image and reflects light from the information display device so that the image can be viewed with the information overlaid thereon.
2. (Once Amended) A viewing optical system ~~system, as claimed in claim 1,~~
~~further~~ comprising:
an objective system for forming on an image surface an image of an object;
an eyepiece system for enlarging and directing the image to a pupil;
a hologram combiner having an optical power for constructing an equivalent
surface which is optically equivalent to the image surface at a different position than the
image surface as viewed from the pupil;
an information display device for displaying information on the equivalent surface;
a mirror for reflecting the image formed by the objective system;
a focusing screen;
a condenser lens; and

a pentagonal prism for inverting the image, said pentagonal prism having a plurality of surfaces, said hologram combiner being disposed on one of said plurality of ~~surfaces, surfaces.~~

wherein the hologram combiner transmits light from the image and reflects light from the information display device so that the image can be viewed with the information overlaid thereon.

7. (Once Amended) A viewing optical system, ~~as claimed in claim 1, further~~ comprising:

an objective system for forming on an image surface an image of an object;

an eyepiece system for enlarging and directing the image to a pupil;

a hologram combiner having an optical power for constructing an equivalent surface which is optically equivalent to the image surface at a different position than the image surface as viewed from the pupil;

an information display device for displaying information on the equivalent surface;

a field frame; and

an inverting system comprising a first prism and a second prism arranged with a small space therebetween, the small space forming a TIR surface, the hologram combiner being disposed on a second prism side of the TIR surface, ~~and~~

wherein the objective system comprises a plurality of lenses and a prism, and
~~prism.~~

wherein the hologram combiner transmits light from the image and reflects light from the information display device so that the image can be viewed with the information overlaid thereon.

10. (Twice Amended) An optical apparatus comprising a viewing optical system, said viewing optical system comprising:

an objective system for forming on an image surface an image of an object;

an eyepiece system for enlarging and directing the image to a pupil;

a hologram combiner comprising a reflective type hologram and having an optical power for constructing an equivalent surface which is optically equivalent to the image surface at a different position than the image surface as viewed from the pupil; and
an information display device for displaying information on the equivalent surface,
wherein the hologram combiner transmits light from the image and reflects light from the information display device so that the image can be viewed with the information overlaid thereon.

11. (Once Amended) An optical ~~apparatus, as claimed in claim 10, said~~ apparatus comprising a viewing optical system, said viewing optical system further comprising:

an objective system for forming on an image surface an image of an object;
an eyepiece system for enlarging and directing the image to a pupil;
a hologram combiner having an optical power for constructing an equivalent surface which is optically equivalent to the image surface at a different position than the image surface as viewed from the pupil;
an information display device for displaying information on the equivalent surface;
a mirror for reflecting the image formed by the objective system;
a focusing screen;
a condenser lens; and
a pentagonal prism for inverting the image, said pentagonal prism having a plurality of surfaces, said hologram combiner being disposed on one of said plurality of ~~surfaces, surfaces.~~
wherein the hologram combiner transmits light from the image and reflects light from the information display device so that the image can be viewed with the information overlaid thereon.

16. (Once Amended) An optical ~~apparatus, as claimed in claim 10, said~~ apparatus comprising a viewing optical system, said viewing optical system further comprising:

an objective system for forming on an image surface an image of an object;

an eyepiece system for enlarging and directing the image to a pupil;

a hologram combiner having an optical power for constructing an equivalent surface which is optically equivalent to the image surface at a different position than the image surface as viewed from the pupil;

an information display device for displaying information on the equivalent surface;

a field frame; and

an inverting system comprising a first prism and a second prism arranged with a small space therebetween, the small space forming a TIR surface, the hologram combiner being disposed on a second prism side of the TIR surface, and

wherein the objective system comprises a plurality of lenses and a prism, and
~~prism.~~

wherein the hologram combiner transmits light from the image and reflects light from the information display device so that the image can be viewed with the information overlaid thereon.